

Mineral Industry Surveys

For information, contact:

Lisa A. Corathers, Silicon Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4973, Fax: (703) 648-7757
E-mail: lcorathers@usgs.gov

Lisa D. Miller (Data)
Telephone: (703) 648-7973
Fax: (703) 648-7975
E-mail: millerl@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

SILICON IN MARCH 2006

Preliminary data for March 2006 indicate that both domestic production and net shipments of ferrosilicon, on a gross-weight basis, increased by 5% compared with the revised February 2006 figures of 19,400 and 16,100 metric tons (t), respectively, according to the U.S. Geological Survey. Ferrosilicon stocks in March were 20,300 t, an 18% decrease compared with revised stocks for the prior month. Data on domestic silicon metal production, net shipments, and stocks were not available at publication.

Domestic production and shipments of ferrosilicon during the first quarter of 2006 were 21% and 11% higher, respectively, than those of the fourth quarter of 2005. They were 13% higher and 2% lower, respectively, compared with those during the first quarter of 2005. All domestic data for ferrosilicon have been combined to avoid disclosing company proprietary data.

Based on a gross-weight comparison of February 2006 export data (table 2) with those of January 2006, ferrosilicon exports decreased by 13%, owing to a decrease in the ferrosilicon, more than 55% silicon, trade category. Silicon metal exports decreased by 22% primarily because of decreases in the 99.00% to 99.99% silicon and "other" silicon metal trade categories.

Based on a gross-weight comparison of February 2006 import data (table 3) with those of January 2006, ferrosilicon imports increased by 90%, owing primarily to an increase in the ferrosilicon, 55%-80% silicon, other, trade category. Silicon metal imports decreased by 46% over the same period primarily because of decreases in the 99.00%-99.99% silicon and "other" silicon metal trade categories.

Prices, cents per pound, silicon content

| | <u>50% Ferrosilicon¹</u> | <u>75% Ferrosilicon²</u> | <u>Silicon Metal²</u> |
|-----------------|-------------------------------------|-------------------------------------|----------------------------------|
| March 2 | 52.00-54.00 | 48.00-50.00 | 71.00-75.00 |
| March 9 | 52.00-54.00 | 48.00-50.00 | 72.00-76.00 |
| March 16 | 56.00-60.00 | 48.50-51.00 | 72.00-76.00 |
| March 23 | 60.00-62.00 | 48.50-51.00 | 72.00-76.00 |
| March 30 | 60.00-62.00 | 48.00-51.00 | 73.00-76.00 |

¹Source: Ryan's Notes, North American transaction price.

²Source: Platts Metals Week, dealer import price.

TABLE 1
U.S. PRODUCTION, SHIPMENTS, AND PRODUCER STOCKS OF SILICON ALLOYS AND METAL IN 2006^{1, 2, 3}

(Metric tons)

| Material | Gross production ⁴ | | Net shipments | | Stocks, March 31 |
|--|-------------------------------|--------------|---------------|--------------|---------------------|
| | March | Year to date | March | Year to date | |
| Ferrosilicon, all grades ^{5, 6} | 20,400 | 59,900 | 16,900 | 47,500 | 20,300 |
| Silicon metal, excludes semiconductor grades | NA | NA | NA | NA | NA |

NA Not available.

¹Data are rounded to no more than three significant digits.

²Includes U.S. Geological Survey estimates.

³Data for silvery pig iron (less than 25% silicon) withheld to avoid disclosing company proprietary data.

⁴Includes in-plant consumption, as in production of magnesium ferrosilicon and other miscellaneous alloys.

⁵Ferrosilicon categories were aggregated to avoid disclosing company proprietary data.

⁶Includes miscellaneous silicon alloys.

TABLE 2
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN FEBRUARY 2006^{1, 2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | Year to date | | |
|---------------------------|--------------|--------------------|------------|--------------|--------------------|-------------|
| | | | | Gross weight | Contained weight | Value |
| Ferrosilicon: | | | | | | |
| More than 55% silicon: | | | | | | |
| Canada | 199 | 120 | \$221,000 | 572 | 343 | \$597,000 |
| Colombia | 7 | 5 | 9,750 | 12 | 9 | 17,600 |
| Malaysia | 139 | 85 | 181,000 | 212 | 129 | 282,000 |
| Mexico | 11 | 8 | 15,600 | 11 | 8 | 15,600 |
| Total | 356 | 218 | 427,000 | 808 | 490 | 912,000 |
| Other ferrosilicon: | | | | | | |
| Canada | 224 | 112 | 208,000 | 404 | 202 | 390,000 |
| Colombia | 12 | 6 | 17,600 | 26 | 12 | 37,100 |
| Indonesia | 8 | 4 | 9,360 | 8 | 4 | 9,360 |
| Mexico | 49 | 24 | 71,200 | 144 | 72 | 188,000 |
| Total | 292 | 146 | 306,000 | 582 | 290 | 624,000 |
| Total ferrosilicon | 648 | 364 | 734,000 | 1,390 | 780 | 1,540,000 |
| Metal: | | | | | | |
| More than 99.99% silicon: | | | | | | |
| China | 119 | XX | 6,310,000 | 207 | XX | 12,900,000 |
| Finland | 1 | XX | 36,200 | 22 | XX | 894,000 |
| Germany | 153 | XX | 7,900,000 | 367 | XX | 19,500,000 |
| Italy | 10 | XX | 929,000 | 23 | XX | 1,890,000 |
| Japan | 618 | XX | 49,700,000 | 1,220 | XX | 93,700,000 |
| Korea, Republic of | 96 | XX | 7,710,000 | 210 | XX | 16,800,000 |
| Malaysia | 6 | XX | 858,000 | 13 | XX | 1,890,000 |
| Norway | 163 | XX | 7,690,000 | 361 | XX | 18,000,000 |
| Taiwan | 39 | XX | 2,140,000 | 70 | XX | 4,010,000 |
| United Kingdom | 7 | XX | 833,000 | 28 | XX | 2,360,000 |
| Other (26 countries) | 34 | XX | 1,790,000 | 57 | XX | 3,020,000 |
| Total | 1,250 | 1,250 ^e | 85,900,000 | 2,570 | 2,570 ^e | 175,000,000 |

See footnotes at end of table.

TABLE 2--Continued
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN FEBRUARY 2006^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | Year to date | | |
|--------------------------|--------------|------------------|------------|--------------|------------------|-------------|
| | | | | Gross weight | Contained weight | Value |
| Metal--Continued: | | | | | | |
| 99.00% - 99.99% silicon: | | | | | | |
| Belarus | -- | -- | -- | 34 | 34 | \$37,700 |
| Brazil | 90 | 89 | \$233,000 | 130 | 129 | 329,000 |
| China | 13 | 13 | 23,700 | 30 | 30 | 47,700 |
| Costa Rica | -- | -- | -- | 3 | 2 | 6,010 |
| Germany | 2 | 2 | 2,790 | 294 | 291 | 853,000 |
| India | 52 | 51 | 150,000 | 52 | 51 | 150,000 |
| Japan | 3 | 3 | 4,200 | 15 | 15 | 15,000 |
| Mexico | -- | -- | -- | 7 | 7 | 10,100 |
| Singapore | 4 | 4 | 5,490 | 4 | 4 | 5,490 |
| United Kingdom | 3 | 3 | 4,160 | 5 | 5 | 6,990 |
| Total | 167 | 165 | 424,000 | 573 | 569 | 1,460,000 |
| Other silicon: | | | | | | |
| Brazil | 19 | 18 | 25,100 | 38 | 37 | 50,200 |
| Canada | 30 | 29 | 46,300 | 51 | 50 | 75,600 |
| China | -- | -- | -- | 45 | 44 | 60,000 |
| Germany | -- | -- | -- | 7 | 7 | 18,200 |
| Italy | 12 | 12 | 16,000 | 12 | 12 | 16,000 |
| Japan | 116 | 113 | 153,000 | 135 | 131 | 234,000 |
| Korea, Republic of | 278 | 270 | 367,000 | 873 | 848 | 1,150,000 |
| Mexico | 31 | 30 | 66,400 | 38 | 37 | 93,500 |
| Netherlands | 22 | 21 | 113,000 | 48 | 45 | 414,000 |
| Taiwan | 14 | 13 | 18,300 | 14 | 13 | 18,300 |
| Other (2 countries) | 7 | 6 | 78,300 | 7 | 6 | 78,300 |
| Total | 528 | 512 | 883,000 | 1,270 | 1,230 | 2,210,000 |
| Total silicon metal | 1,940 | 1,920 | 87,200,000 | 4,420 | 4,370 | 179,000,000 |

⁶Estimated. XX Not applicable.

¹Presentation of monthly data is based on the year-to-date quantities (gross weight) of the top 10 countries.

²Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN FEBRUARY 2006^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | Year to date | | |
|--------------------------------|--------------|------------------|------------|--------------|------------------|------------|
| | | | | Gross weight | Contained weight | Value |
| Ferrosilicon: | | | | | | |
| 55% - 80% silicon, over 3% Ca: | | | | | | |
| Brazil | -- | -- | -- | 20 | 13 | \$24,500 |
| China | -- | -- | -- | 2 | 1 | 2,780 |
| Total | -- | -- | -- | 22 | 14 | 27,300 |
| 55% - 80% silicon, Other: | | | | | | |
| Brazil | 20 | 14 | \$13,600 | 1,590 | 1,180 | 1,120,000 |
| Canada | 643 | 494 | 660,000 | 1,640 | 1,250 | 1,550,000 |
| China | 8,740 | 6,630 | 5,430,000 | 11,700 | 8,900 | 7,270,000 |
| France | 416 | 280 | 715,000 | 949 | 635 | 1,770,000 |
| Germany | 65 | 48 | 291,000 | 82 | 61 | 375,000 |
| Norway | 492 | 368 | 635,000 | 956 | 715 | 1,310,000 |
| Russia | 3,360 | 2,520 | 1,810,000 | 6,860 | 5,140 | 3,870,000 |
| South Africa | 1,270 | 944 | 718,000 | 1,270 | 944 | 718,000 |
| United Kingdom | 18 | 12 | 63,900 | 18 | 12 | 63,900 |
| Venezuela | 5,030 | 3,770 | 3,070,000 | 5,030 | 3,770 | 3,070,000 |
| Other (Kazakhstan) | 12 | 2 ³ | 7,300 | 12 | 2 ³ | 7,300 |
| Total | 20,100 | 15,100 | 13,400,000 | 30,100 | 22,600 | 21,100,000 |
| More than 90% silicon, China | 21 | 19 | 6,300 | 21 | 19 | 6,300 |
| Magnesium ferrosilicon: | | | | | | |
| Argentina | 138 | 61 | 128,000 | 334 | 149 | 318,000 |
| Canada | 694 | 320 | 705,000 | 1,350 | 625 | 1,350,000 |
| France | 143 | 67 | 127,000 | 539 | 251 | 468,000 |
| Germany | -- | -- | -- | 18 | 10 | 30,700 |
| India | -- | -- | -- | 20 | 9 | 18,000 |
| Japan | -- | -- | -- | 32 | 15 | 50,400 |
| Netherlands | -- | -- | -- | 82 | 38 | 60,200 |
| Norway | 845 | 389 | 741,000 | 1,470 | 679 | 1,330,000 |
| Russia | 2,100 | 943 | 854,000 | 2,100 | 943 | 854,000 |
| South Africa | -- | -- | -- | 19 | 9 | 21,400 |
| Other (2 countries) | 130 | 59 | 123,000 | 299 | 135 | 285,000 |
| Total | 4,040 | 1,840 | 2,680,000 | 6,260 | 2,860 | 4,790,000 |
| Other ferrosilicon: | | | | | | |
| Brazil | 26 | 4 | 32,700 | 26 | 4 | 32,700 |
| Canada | 730 | 178 | 623,000 | 1,440 | 367 | 1,230,000 |
| India | -- | -- | -- | 71 | 31 | 59,700 |
| United Kingdom | 1 | 1 | 2,280 | 1 | 1 | 2,280 |
| Total | 757 | 182 | 658,000 | 1,530 | 403 | 1,320,000 |
| Total ferrosilicon | 24,900 | 17,100 | 16,800,000 | 37,900 | 25,900 | 27,300,000 |

See footnotes at end of table.

TABLE 3--Continued
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN FEBRUARY 2006^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | Year to date | | |
|---------------------------|--------------|------------------|------------|--------------|------------------|------------|
| | | | | Gross weight | Contained weight | Value |
| Metal: | | | | | | |
| More than 99.99% silicon: | | | | | | |
| Belgium | -- | XX | -- | 5 | XX | \$42,900 |
| China | 1 | XX | \$101,000 | 3 | XX | 435,000 |
| Dominican Republic | -- | XX | -- | 3 | XX | 6,530 |
| France | 4 | XX | 369,000 | 7 | XX | 652,000 |
| Germany | 64 | XX | 4,630,000 | 142 | XX | 10,000,000 |
| Italy | 18 | XX | 1,350,000 | 46 | XX | 3,090,000 |
| Japan | 25 | XX | 2,120,000 | 53 | XX | 4,410,000 |
| Korea, Republic of | 4 | XX | 636,000 | 7 | XX | 1,090,000 |
| Sweden | -- | XX | -- | 8 | XX | 54,300 |
| Taiwan | 3 | XX | 181,000 | 3 | XX | 181,000 |
| Other (5 countries) | 2 | XX | 72,900 | 4 | XX | 123,000 |
| Total | 121 | 121 ^e | 9,470,000 | 280 | 280 ^e | 20,100,000 |
| 99.00% - 99.99% silicon: | | | | | | |
| Australia | 1,120 | 1,110 | 1,760,000 | 1,620 | 1,610 | 2,550,000 |
| Brazil | 2,540 | 2,520 | 3,750,000 | 5,960 | 5,920 | 8,840,000 |
| Canada | 1,040 | 1,030 | 1,700,000 | 3,310 | 3,280 | 5,380,000 |
| Norway | 487 | 484 | 1,020,000 | 828 | 823 | 1,720,000 |
| Philippines | 125 | 124 | 125,000 | 179 | 177 | 189,000 |
| South Africa | 1,210 | 1,200 | 1,860,000 | 5,420 | 5,380 | 7,370,000 |
| Sweden | -- | -- | -- | 1 | 1 | 7,760 |
| United Kingdom | 35 | 10 | 94,900 | 35 | 10 | 99,800 |
| Total | 6,560 | 6,490 | 10,300,000 | 17,300 | 17,200 | 26,200,000 |
| Other silicon: | | | | | | |
| Belgium | 7 | 7 | 21,000 | 14 | 13 | 41,500 |
| Brazil | 139 | 137 | 180,000 | 1,600 | 1,580 | 2,440,000 |
| Canada | 545 | 529 | 869,000 | 1,230 | 1,180 | 1,620,000 |
| Japan | -- | -- | -- | 7 | 7 | 21,000 |
| Norway | -- | -- | -- | 1,000 | 985 | 1,550,000 |
| Sweden | 8 | (4) | 8,760 | 16 | (4) | 18,000 |
| Ukraine | 332 | 327 | 390,000 | 615 | 606 | 720,000 |
| United Kingdom | 60 | 59 | 94,000 | 60 | 59 | 94,000 |
| Total | 1,090 | 1,060 | 1,560,000 | 4,540 | 4,430 | 6,500,000 |
| Total silicon metal | 7,770 | 7,670 | 21,300,000 | 22,200 | 21,900 | 52,800,000 |

^eEstimated. XX Not applicable.

¹Presentation of monthly data is based on the year-to-date quantities (gross weight) of the top 10 countries.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³All or part of these data have been referred to the U.S. Census Bureau for verification.

⁴Less than ½ unit.

Source: U.S. Census Bureau.